

# **COLUMBIA RIVER REGIONAL FORUM**

## **TECHNICAL MANAGEMENT TEAM**

August 29, 2007 Conference Call

### **FACILITATOR'S SUMMARY NOTES ON FUTURE ACTIONS**

Facilitator: Robin Gumpert

Notes: Erin Halton

The following notes are a summary of issues that are intended to point out future actions or issues that may need further discussion at upcoming meetings. These notes are not intended to be the “record” of the meeting, only a reminder for TMT members.

#### **Review of Facilitator Notes / Meeting Minutes**

The facilitator summary and official meeting minutes from the 8/22 TMT meeting had been posted to the web. John Roache, BOR, Jim Adams, COE, and Paul Wagner, NOAA, made the following edits to the official Meeting Minutes from August:

- **8/8** Minutes: In operations review reservoir section, John clarified that Columbia Falls minimum flow is 3500 cfs.
- **8/15** minutes: the operations review for Grand Coulee/Banks Lake should read, “draft toward 1565', 5' from full.”
- **8/22** minutes: the COE clarified that under Dworshak Operations, the projected temperatures for a single unit operation were provided for TMT consideration only, and not meant to be a recommended strategy. The COE added clarifying language referencing the 2007 Spill Agreement.
- **8/22** minutes: Under the ‘End of Spill’ section, NOAA and the COE clarified minimum flows for Little Goose and Ice Harbor. Due to the outage at Sacagawea, minimum flows at Ice Harbor are 9.5 kcfs.

#### **Dworshak Operations Update**

*Existing Conditions:* Jim Adams, COE, reported on Lower Snake River temperatures: the Lower Granite tailwater was averaging 65° F; Little Goose tailwater was at 67.1°; Lower Monumental reached 68° on 8.28. The Lower Monumental pool was expected to cool to below 68° due to overall river cooling.

*Dworshak Pool Temperatures:* Dworshak was discharging an average temperature of 47.8° F; outflows had previously risen to a 7.9-8.0 kcfs range due to decreased head in the pool, but were down to 7.7 kcfs to better meet the recommendation from the Dworshak Board. TMT was referred to a thermocline graph posted to the TMT agenda, showing 2007 Dworshak pool temperatures tracking cooler than in 2006 and warmer than in 2005. TMT members suggested that the graph might be easier to read if the current year's conditions were more ‘stand out.’ The COE welcomed suggestions for making improvements to the graphs to be more user-friendly.

*STP Graph:* An STP graph, based on the April-July volume of 1.8 MAF, showed that elevation 1520' could be reached by the end of September by shaping outflows of 7.7 kcfs through 9/10, then making step-down flow reductions the rest of the month. The

change in outflow was also based on a recommendation from the Dworshak Board to meet elevation 1535' on or near August 30.

*Dworshak Board Agreement:* Greg Haller, Nez Perce tribe, speaking on behalf of the Dworshak Board (chaired by the Nez Perce Tribe and comprised of BPA, ID, and NOAA representatives), reported on the tentative plan to use the granted 200 kaf for September: Reduce outflows from 7.7 kcfs to 5.4 kcfs late 9/9 or early 9/10 ; reduce outflows to 2.4 kcfs on 9/13 or 9/14 , then ramp down to 1.4 kcfs around on 9/18 and maintain the minimum outflow until the end of September. Maintain desired temperatures as best as possible by making unit (undershot/overshot) adjustments at the project.

**Action/Next Steps:** The COE will continue to provide TMT and the Dworshak Board with updates on Dworshak conditions. The Dworshak Board will meet as needed and this item will be on the agenda for scheduled 9/5 TMT conference call.

### **McNary TSW/Plan for End of Spill**

Bernard Klatte, COE, reported on end of spill specifications for McNary. Spill at the project will end on 8/30. Klatte said a modified spill pattern to be used during TSW work was posted to the TMT agenda and noted that spillbay 7 would need to close in order to install stop logs in preparation for maintenance work on that bay. Klatte said the pattern had been coordinated with NOAA and that this would be implemented for about 36 hours. Jim Adams, COE, added that he had notified John Piggott of the Towboaters Association, and no concerns had been raised.

**Action/Next Steps:** The COE will implement the McNary plan for end of spill on 8/30.

### **Little Goose Doble Testing**

Don Faulkner, COE, reported on an outage request to complete doble testing at Little Goose. He clarified that there is a regulatory requirement to test the equipment every three years and said the COE could do the work on 9/17-19 or 10/9-11, and that the ability to complete the work would require favorable weather conditions. ID and NOAA raised concerns regarding the effect on fish migration in mid-September, as peak steelhead and fall Chinook passage occurs at the project at that time. Cindy Henriksen, COE, acknowledged the concern of the Salmon Managers and suggested there was a possibility that the work might be able to be done later in the evening, depending on whether contractors were available. BPA expressed support for the COE's need to finish the doble testing at the project. Salmon Managers expressed a preference for the 10/9-11 dates, as impacts to passage would be less detrimental than earlier in September.

**Action/Next Steps:** The COE planned to completed doble testing on 10/9-11 and to explore the option of testing later in the evening. Follow-up on this item will be added to the agenda for the 9/5 TMT call. As doble testing normally is completed in mid-August at Little Goose, all supported completing the work in one stage and on time (to the extent possible) in the future, to avoid conflicts with fish passage. .

Don Faulkner, COE, gave TMT a heads up that structural work will also need to be done at Lower Granite but that it should have no impact on fish operations.

### **2008 Water Management Plan**

Scott Boyd, COE, reminded TMT members to send comments on the draft 2008 Water Management Plan. The plan was posted as a link to the TMT homepage and Boyd said he emailed TMT members a word version of the document.

**Action/Next Steps:** TMT members should submit their comments on the draft plan in track changes format. This item will be on the September 5 TMT agenda.

### **Emergency Action Plan**

Robyn MacKay, BPA, said that the COE and BPA were in the process of developing mutually agreeable language in an Emergency Action Plan document and that the goal was to include the document as part of the TMT Emergency Protocols in the WMP.

**Action/Next Steps:** This will be on the agenda at an upcoming TMT meeting.

### **Operations Review**

*Reservoirs* – Jim Adams, COE and John Roache, BOR, reported on reservoir operations. Grand Coulee was at elevation 1280.15', and targeting an elevation of 1278' by 8/31. Hungry Horse was at elevation 3543.52' with outflows at 4.4 kcfs and holding through August. Starting on September 1, outflows will be ramped down to around 2.2-2.3 kcfs in order to meet Columbia Falls minimums. It will take 3-4 days to ramp down discharges at Hungry Horse. Libby was at elevation 2440.01'; inflows were at 5.1 kcfs and outflows were at 15 kcfs, to meet the 8/31 elevation target of 2439'. The STP for Libby showed reducing outflows to 9.0 kcfs beginning 9/1, then reducing to 6.0 kcfs in mid-September for the rest of the month. Albeni Falls was at 2062.15', with inflows of 7.29 kcfs and outflows of 8.24 kcfs, and the project will likely drop its elevation by 1.5' in the first couple weeks of September. Dworshak was at elevation 1536.65', with inflows of .5 kcfs and outflows of 7.7 kcfs. Seven-day average flows at Lower Granite were 22.3 kcfs and 133 kcfs at McNary.

*Fish* – Paul Wagner, NOAA, reported on juvenile and adult fish: sub yearlings were passing in the less than 100 per day range at Lower Granite and Little Goose; passage was in the single-digit per day range at Lower Monumental, and in the couple hundred per day range at McNary. He noted that Fall chinook adult passage over Bonneville was in the 3,000 per day range and that steelhead were ranging 3,000-5,000 and were above average for the season.

*Power system* – Nothing to report.

*Water quality* – Jim Adams, COE, reported one exceedance at Camas/Washougal. He added that Bonneville flows were low and that spill season ends on 8/31.

### **Next TMT meeting: a conference call on Wednesday, September 5<sup>th</sup>**

Agenda items will include:

- Dworshak Operations

- Little Goose Doble Testing Update
- Comments on the Draft 2008 Water Management Plan
- Operations Update

**Columbia River Regional Forum  
Technical Management Team Conference Call  
Aug. 29, 2007**

**1. Introduction**

Today's conference call was chaired by Jim Adams (COE) and facilitated by Robin Gumpert (formerly Harkless), with representatives from COE, the Nez Perce Tribe, BPA, NOAA, BOR, FPC Montana, and Idaho attending. The following is a summary (not a verbatim transcript) of the topics discussed and decisions made at the meeting. Anyone with questions or comments about these notes should provide them to the TMT chair or bring them to the next meeting.

**2. Review Meeting Minutes**

John Roache (BOR) commented on the 8-08-07 official minutes, section 6 Operations Review, which reads: "Hungry Horse operations will ramp down to the Columbia Falls minimum (WHAT IS THIS?)." He said "3,500 cfs" could replace the parenthetical query.

Roache commented on the 8-15-07 official minutes, section 6, Operations Review, which reads: "The plan for Banks Lake is the same as every year: draft 5 feet out toward elevation 1,570 feet." The elevation should be 1,565, not 1,570.

Jim Adams (COE) added a notation to the 8-22-07 minutes, section 3, Dworshak Operations, to explain that the COE wasn't recommending an operational strategy: "The COE is going to implement the operational strategy outlined in the 2007 operational plan for use of the Nez Perce Tribe's 200 kaf of stored water in Dworshak reservoir. Any amendments to this strategy will occur upon the unanimous written consent of the parties of the Nez Perce board."

Adams also added a supplemental notation to the 8-22-07 official minutes, section 4, End of Spill, to clarify that minimum September flows are 11.5 kcfs for Little Goose and Lower Monumental. Normally, minimum flows at Ice Harbor are 7.5 kcfs for August to November, but the Sacajawea Transformer outage means minimum flows will be 9.5 kcfs.

**3. Dworshak Operations**

The daily average temperature at Lower Granite tailwater was 65.0 degrees F on Aug. 28, well below the 68 degree F criteria according to today's temperature report, Adams said. The daily average temperature at Little Goose tailwater is 67.1 degrees F, and tailwater temperatures at Lower Monumental have been below criteria until Aug. 28 when temperatures bumped up slightly to 68.3 degrees F. They're coming down again because the river is cooling. In a few

days to a week, Ice Harbor tailwater temperatures should be below criteria, Adams said.

The latest Dworshak STP run shows operations at 7.7 kcfs outflows until around Sept. 10, and then dropping as per the operational strategy from the Nez Perce board, Adams said (see below). Flows at Dworshak had slowly increased to about 7.9 – 8.0 kcfs recently due to decreased head from the falling reservoir elevation. However, flow was reduced to 7.7 to be in alignment with the recommendation of the Dworshak Board to have the Dworshak reservoir reach elevation 1,535 feet on or around Aug. 30.

Greg Haller (Nez Perce) gave background on the Nez Perce 200 kaf plan. As per the Snake River water rights act of 2004, the tribe controls the use of 200 kaf in Dworshak reservoir for flow augmentation and temperature control. The operation of that is ordained through a Memorandum of Agreement with several parties and the Nez Perce Tribe as chair. The Dworshak board includes representation by the COE, BPA, NOAA, and Idaho. The task of developing the tribal plan for the 200 kaf is completed for this year, based on six considerations:

1. Projected summer water temperature and flow conditions for the Snake River at Lower Granite Dam
2. Growth rates of juvenile fall Chinook in the Clearwater River
3. Migration status of juvenile fall Chinook in the Clearwater and Snake rivers
4. Migration status of adult steelhead and fall Chinook
5. Cultural resources in and around Dworshak reservoir
6. Summer recreational uses of Dworshak reservoir

Haller gave the timing of stored water releases under the plan. The board decided to continue the current operation of approximately 7.7 kcfs outflows until around Sept. 9, with expected water temperatures around 47-48 degrees F from that operation. On or around Sept. 9, outflows will drop to 5.4 kcfs. Normally, the 5.4 kcfs outflow is achieved by using Unit 3 (the big unit) alone, which draw water either in overshoot or undershot. Haller estimated that overshoot mode would yield temperatures around 55 degrees F. Adams estimated that operation in overshoot mode may result in outflow temperatures closer to 60 degrees F. Operation in undershot mode would yield temperatures around 42-45 degrees F, Adams said. The board will decide about overshoot/undershot operations closer to the ramp down on Sept. 9.

Brian Marotz (Montana) asked, isn't there a concern about stranding or impacting the morphology of the river downstream at these ramp down rates? There are no stranding issues in the Clearwater River at present, Haller replied. Haller will let TMT know if the board makes any significant changes to the plan. This topic will be on the Sept. 5 and Sept. 26 TMT agendas.

#### **4. McNary TSW Closure/Spill Pattern**

At the last meeting, TMT agreed to an operational request to close the TSWs at McNary on Aug. 30<sup>th</sup> rather than on Aug. 31<sup>st</sup>, due to the holiday schedule, Bern Klatte (COE) said. Subsequently, hydraulic engineer Ken Hanson (COE – Walla Walla) worked with Gary Fredricks (NOAA) to develop a spill pattern to use during the time when spill bays #20 and #22 are closed (these are the spill bays where the TSW's are located) and the end of voluntary spill at midnight on Aug. 31<sup>st</sup>. In addition, project staff requested permission to close spill bay 7 on Aug. 30 so the contractor can begin work on the gates. While the refurbishing work wouldn't begin until Sept. 4<sup>th</sup>, the project would like to tag out the gate on the 30<sup>th</sup> so they could prepare for the contractor work.

None of the salmon managers present objected to this request. The closure will take place Aug. 30-31, pending any navigational concerns regarding the altered spill pattern. If there is a navigation problem, the spill patterns in the fish passage plan can be used as previously discussed.

#### **5. Little Goose Doble Testing**

The Doble testing at Little Goose couldn't be completed in August due to equipment failure, Don Faulkner (COE) said, so Walla Walla project staff requested a three day outage on Sept. 11-13 to complete the work. TMT discussed the need for Doble testing, a regulatory requirement every three years. The COE can't afford to delay this testing, given that a failed transformer can be out of service for two years, Faulkner and Henriksen explained. The Snake projects each have two banks with three transformers per bank, all needing doble testing on a regular basis. Testing on the Snake River in particular draws attention because there is only one powerhouse line, meaning the powerhouse is shut down during the tests.

Russ Kiefer (Idaho) asked how the risk of equipment failure compares to the risk of delaying returning adult fall Chinook during their peak migration in mid-September. Oct. 9 is also a possibility for the powerhouse outage, Faulkner said. That would be after the peak steelhead passage, with adult Chinook passage in decline, Wagner said. The cooler temperatures of October would lessen the impacts of delayed migration. Also, steelhead appear to experience fewer problems finding the entrance to the fish ladder than fall Chinook when testing is in progress. The testing needs to occur sometime during fish passage season because it requires good weather. Given these factors, Wagner suggested the COE start planning now for an outage Oct. 9-11, from 6 a.m. to 6 p.m. each day. Given the Salmon Managers' desire to delay the testing as long as possible, the COE will proceed with Oct. 9-11 for the planned outage at Little Goose.

Dave Benner (FPC) asked if the doble testing could be done at night, avoiding dawn when most fish pass. Faulkner will check into that possibility.

When double testing is going on, the COE operates one unit at speed no load for station service and spills the remainder, Adams said. With flows around 20 kcfs, that would mean around 15 kcfs spill. It's possible that adults would not have difficulty finding the ladder at these lower flow rates. The COE will report back to TMT when there is new information on this issue.

The USGS has requested an outage on Sept. 13 at Lower Granite to remove hydrophones from the spillway, Faulkner said. Two units at a time would be out of service, and the plant would not stop generating.

## **6. 2008 Draft Water Management Plan**

Scott Boyd (COE) recently sent out the WMP as a Word document to all TMT members. Comments should be made in "track changes" and sent to him.

## **7. Emergency Action Plan**

BPA and the COE are still working on language for the generation action plan which is to be included in the emergency protocols, Robyn MacKay said. This issue will be revisited at a later date.

## **8. Operations Review**

**a. Reservoirs.** Libby is at elevation 2,440.01 feet, with inflows of 5.1 kcfs and outflows of 15 kcfs. Outflows dropped from 17.3 to 15 kcfs on Aug. 23 to avoid overshooting the elevation target of 2,439 foot for the end of the month. The current STP run shows Libby outflows at 9 kcfs from Sept. 1 until mid-September, when they drop to 6 kcfs for the remainder of September.

Albeni Falls is at elevation 2,062.15 at the Hope gage, with inflows of 7.29 kcfs and outflows of 8.24 kcfs.

Dworshak forebay is at elevation 1,536.65 feet, with inflows of 0.5 kcfs, and outflows of 7.7 kcfs beginning last night. The 7-day inflow average at Lower Granite is 22.3 kcfs. The 7-day inflow average at McNary is 133 kcfs.

Hungry Horse is at elevation 3,543.52 feet, with 4.4 kcfs outflows through the end of August. Operations will ramp down beginning Sept. 1 to meet the Columbia Falls minimum flow. Grand Coulee is at elevation 1,280 feet with a target elevation of 1,278 feet by the end of August.

**b. Fish.** Passage numbers of subyearlings are dropping to less than 100 fish per day at Lower Granite over the past week, Paul Wagner (NOAA) said. Little Goose has passed nearly 100 fish per day over the past week, while numbers at Lower Monumental are in the single digits. McNary is passing about 2,500 fish per day, markedly less than two weeks ago.

Adult fall Chinook passage is increasing at Bonneville to about 3,000 fish per day. Steelhead migration has peaked and is now about 3-5,000 fish per day. The steelhead run is stronger than average, but not stellar.

**c. Power System.** There is nothing to report, Robyn MacKay (BPA) said.

**d. Water Quality.** There was an exceedance at Camas Washougal gage a few days ago, Adams reported. Flows are so low – less than 80 kcfs spill – that there are no additional water quality issues. Spill ends midnight Aug. 31.

## ***7. Next Meetings***

There will be a TMT conference call on Sept. 5, with Dworshak operations, follow-up on the Little Goose double testing, the 2008 WMP, and the usual operations review on the agenda.

TMT won't meet again after the Sept. 5 meeting (unless there's an emergency) until the face-to-face meeting on Sept. 26. This summary prepared by consultant and writer Pat Vivian.

<b><i>Name</i></b>	<b><i>Affiliation</i></b>
Jim Adams	COE
Brian Marotz	Montana
Jim Litchfield	Montana
Robyn MacKay	BPA
Tony Norris	BPA
Paul Wagner	NOAA
John Roache	BOR
Scott Boyd	COE
Don Faulkner	COE
Bernard Klatte	COE

### ***Phone:***

Tim Heizenrader	Centaurus Energy
Ruth Burris	PGE
Tina Lundell	COE
Dan Spear	BPA
Russ Kiefer	Idaho
Richelle Beck	DRA
Cindy Henriksen	COE
Greg Haller	NPT
Dave Benner	FPC